Claims

What is claimed is:

1. A method of providing facsimile service over a digital subscriber line, comprising the steps of:

(a) dialing a telephone number associated with a facsimile machine connected to the digital subscriber line;

(b) setting up a circuit switched connection to an internet service provider;

(c) sending a plurality of facsimile data to the internet service provider;

(d) converting the plurality of facsimile data to an internet protocol to form a plurality of internet facsimile data; and

(e) routing the internet facsimile data over the digital subscriber line.

2. The method of claim 1, further including the steps of:

(f) receiving the internet facsimile data at a local area network hub;

(g) routing the internet facsimile data to the facsimile machine.

3. The method of claim 2, wherein step (g) further includes the step of:

(g1) formatting the internet facsimile data in a local area network protocol.

4. The method of claim 1, wherein step (c) further includes the step of:

(c1) emulating an analog facsimile data standard at the internet service provider.

5. The method of claim 2, wherein the step of routing the internet facsimile data to the facsimile machine includes providing a digital facsimile machine.

6. The method of claim 2, wherein step (g) further includes the steps of:

(g1) receiving the internet facsimile data at a subscriber unit;

(g2) converting the internet facsimile data to the analog facsimile data by the subscriber unit.

7. A method of providing facsimile service over a digital subscriber line, comprising the steps of:

(a) dialing a telephone number at a facsimile machine connected to the digital subscriber line;

(b) transmitting a plurality of facsimile data over a local area network to a local area network hub;

(c) formatting the plurality of facsimile data for transmission over the digital subscriber line to an internet service provider;

(d) establishing an internet telephone call, by the internet service provider, to a facsimile machine associated with the telephone number; and

(f) transmitting the plurality of facsimile data over the internet telephone call to the facsimile machine associated with the telephone number.

8. The method of claim 7, wherein step (a) further includes the steps of:

(a1) receiving the telephone number at a subscriber unit;

(a2) emulating an analog telephone line by the subscriber unit;

(a3) receiving the plurality of facsimile data at the subscriber unit;

(a4) converting the plurality of facsimile data to a plurality of digital data.

9. A method of providing facsimile service over a digital subscriber line, comprising the steps of:

(a) dialing a telephone number associated with a facsimile machine connected to the digital subscriber line;

(b) triggering on the telephone number at a service switching point;

(c) sending a routing query to a switching control point;

(d) routing a facsimile call to an interworking unit;

(e) converting a plurality of analog facsimile data to a plurality of digital facsimile data; and

(f) routing the plurality of digital facsimile data to the digital subscriber line.

10. The method of claim 9, further including the steps of:

(g) receiving the plurality of digital facsimile data at a local area network hub;

(h) routing the plurality of digital facsimile data to the facsimile machine.

11. The method of claim 10, wherein step (h) further includes the step of:

(h1) converting the plurality of digital facsimile data into a local area network protocol to form a LAN data.

12. The method of claim 11, further including the steps of:

(h2) receiving the LAN data at a subscriber unit;

(h3) converting the LAN data to a plurality of analog data;

(h4) sending the plurality of analog data to the facsimile machine.

13. The method of claim 9, wherein step (d) further including the steps of:

(d1) transmitting a routing response from the switching control point to the service switching point;

(d2) connecting the facsimile call to the interworking unit;

(d3) transmitting the plurality of analog facsimile data to the interworking unit.

14. The method of claim 13, further including the step of:

(d4) emulating an analog facsimile data standard by the interworking unit.

15. A method of providing facsimile service over a digital subscriber line, comprising the steps of:

(a) dialing a telephone number at a facsimile machine connected to the digital subscriber line;

(b) transmitting a plurality of facsimile data over a local area network to a local area network hub;

(c) routing the plurality of facsimile data over the digital subscriber line to an internet service provider;

(d) routing the plurality of facsimile data to an interworking unit;

(e) converting the plurality of facsimile data to a circuit switched data protocol to form a circuit switched facsimile data; and

(f) transmitting the circuit switched facsimile data to a facsimile machine associated with the telephone number.

16. The method of claim 15, wherein step (a) further includes the steps of:

(a1) receiving the telephone number at a subscriber unit;

(a2) emulating an analog telephone line by the subscriber unit;

(a3) receiving the plurality of facsimile data at the subscriber unit;

(a4) converting the plurality of facsimile data to a plurality of digital data.

17. A method of providing facsimile service over a digital subscriber line, comprising the steps of:

(a) dialing a telephone number at a facsimile machine connected to the digital subscriber line;

(b) transmitting a plurality of facsimile data over an asynchronous transmission mode local area network to an asynchronous transmission mode switch;

(c) routing the plurality of facsimile data over the digital subscriber line to a network asynchronous transmission mode switch using a virtual circuit;

(d) transmitting the plurality of facsimile data over the virtual circuit to an interworking unit;

(e) converting the plurality of facsimile data to a circuit switched data protocol to form a circuit switched facsimile data; and

(f) transmitting the circuit switched facsimile data to a facsimile machine associated with the telephone number.

18. The method of claim 17, wherein step (c) further includes the step of:

(c1) transmitting a plurality of other data over a second virtual circuit to the asynchronous transmission mode switch.

19. The method of claim 17, wherein step (c) further includes the steps of:

(c1) transmitting a request for a switched virtual circuit to the network asynchronous transmission mode switch;

(c2) receiving a response including a virtual channel identifier.

20. The method of claim 17, wherein step (c) further includes the step of:

(c1) determining a virtual path identifier and a virtual circuit identifier associated with the virtual circuit;

21. The method of claim 18, wherein the second virtual circuit and the virtual circuit share the bandwidth of the digital subscriber line.

22. The method of claim 18, wherein the virtual circuit is transmitted over a separate frequency band from the second virtual circuit.

23. A method of providing facsimile service over a digital subscriber line, comprising the steps of:

(a) dialing a phone number of a facsimile machine connected to the digital subscriber line;

(b) routing the call to an interworking unit;

(c) transmitting a plurality of circuit switched facsimile data to the interworking unit;

(d) converting the plurality of circuit switched facsimile data to a plurality of ATM data and

(f) routing the ATM data over a virtual circuit to the digital subscriber line.

24. The method of claim 23, further including the steps of:

(g) routing the ATM data over the digital subscriber line to an ATM switch;

(h) routing the ATM data to the facsimile machine.

25. The method of claim 24, wherein step (h) further includes the steps of:

(h1) receiving the ATM data at a subscriber unit;

(h2) converting the ATM data to a plurality of analog data;

(h3) transmitting the plurality of analog data to the facsimile machine.

26. The method of claim 23, wherein step (b) further includes the steps of:

(b1) receiving the telephone number at a service switching point;

(b2) triggering on the telephone number;

(b3) sending a routing query to a service control point;

(b4) receiving a routing response including a routing instructions to the interworking unit.

27. A system for providing facsimile service over a digital subscriber line, comprising the steps of:

a facsimile machine coupled to an ATM switch;

the ATM switch coupled to the digital subscriber line, wherein the digital subscriber line includes a first virtual circuit and a second virtual circuit;

an interworking unit coupled to the second virtual circuit, the second virtual circuit connected to the facsimile machine;

a public switch telephone network connected to the interworking unit; and

a facsimile machine connected to the public switched telephone network.

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